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STRIKER, STRIKER & STENBY  
103 East Neck Road  
Huntington, NY 11743

EXAMINER
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GOLLAMUDI, SHARMILA S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/606,046	<b>Applicant(s)</b> BIRKEL ET AL.	
	<b>Examiner</b> Sharmila S. Gollamudi	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

Receipt of Amendments/Remarks filed 3/31/06 and IDS filed 4/6/06 is acknowledged. Claims 1-16 and 18 are pending.

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 4/6/06 has been considered. However, two of the NPL documents cited fail to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Nambu (6,231,844).**

Nambu discloses a hair mousse composition comprising a propellant (LPG), Polyquaternium 4 (hair fixing polymer), Polyquaternium 7 (hair fixing polymer), ethanol (solvent), and water (solvent), among other components. See example 6 in particular. The composition is packaged into cans (pressure resistant container). See column 11, lines 61-62. The composition has foam-forming abilities. See column 3, lines 4-20. Nambu discloses that when

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the composition comprises a propellant, the components must be contained under pressure in a suitable vessel, which is well known in the art, i.e. a pressed dispensing package (pressure resistant container). See column 6, lines 20-25.

With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. “Products of identical chemical composition can not have mutually exclusive properties.” In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

### ***Response to Arguments***

Applicant argues Nambu does not disclose any foam able composition that produces the instant strand drawing properties.

Applicant's arguments filed 3/31/06 have been fully considered but they are not persuasive. The instant claim is directed to 1) at least one hair-fixing polymer, 2) at least one propellant, 3) at least one solvent system in a pressure resistant container. The examiner points out that Nambu teaches the same physical components as claimed; thus the functional limitation must be the same. The examiner further points out that the USPTO does not have the facilities to test products for their inherent properties and thus the examiner must make a sound rationale that the properties are inherent. In instant case, the examiner has done so by showing that the claimed composition and the prior art are identical. “Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the

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same, the applicant has the burden of showing that they are not. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433.” See MPEP 2112.01 (I).

Applicant has not provided any evidence demonstrating the prior art composition does not have the instant strand drawing properties. It is further pointed out that Nambu teaches Polyquaternium-7 and the instant disclosure teaches the dialkylammonium chloride/acrylamide copolymer provides the instant strand drawing properties. Lastly, it is pointed out that the instant claims recite the strand must have “diameter of 2mm or *less than 1mm*”, which includes all the values below 1mm, including zero.

**Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Grollier et al (4,761,273).**

Grollier et al disclose an aerosol foam compositions comprising an anionic and cationic polymer, which is packaged in a pressurized form. See abstract and column 1, lines 10-15. Specifically Grollier discloses a composition comprising Celquat L 200 (hair fixing polymer), Ultrahold 8 (hair fixing polymer), ethanol (solvent), water (solvent), and a propellant. The composition is packaged in an aluminum container (pressure resistant container). See example 10.

With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. “Products of identical chemical composition can not have mutually exclusive properties.” In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

***Response to Arguments***

Applicant argues Grollier does not disclose any foamable composition that produces the instant strand drawing properties.

Applicant's arguments filed 3/31/06 have been fully considered but they are not persuasive. The instant claim is directed to 1) at least one hair-fixing polymer, 2) at least one propellant, 3) at least one solvent system in a pressure resistant container. The examiner points out that Grollier teaches the same physical components as claimed; thus the functional limitation must be the same. The examiner further points out that the USPTO does not have the facilities to test products for their inherent properties and thus the examiner must make a sound rationale that the properties are inherent. In instant case, the examiner has done so by showing that the claimed composition and the prior art are identical. "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433." See MPEP 2112.01 (I). Applicant has not provided any evidence demonstrating the prior art composition does not have the instant strand drawing properties. Lastly, it is pointed out that that the instant claims recite

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the strand must have “diameter of 2mm or *less than 1mm*”, which includes all the values below 1mm, including zero.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schehlmann et al (6,428,394) in view of Bolich et al (5,965,115).**

Schehlmann et al teach hair treatment compositions comprising at least one cationic and at least one anionic polymer having methacrylic and ethyl units, wherein the composition is in the form of pump sprays and pump foams that are free from propellant gases. See abstract.

Schehlmann teaches the hair treatment compositions of the invention are soluble in water, alcohols or water/alcohol mixtures and are therefore easy to apply to the hair. Suitable alcohols are monoalcohols such as C1-C6 -alkanols, especially ethanol or isopropanol, polyalcohols, such

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as alkylene glycols, especially ethylene glycol, and also glycol ethers and esters having hydroxyl groups. The pump sprays and pump foams also include neutralizing agents such as 2-amino-2-methyl-1-propanol or triethanolamine in an amount of from 0.1 to 1% by weight. Schehlmann teaches the preferred anionic polymers employed are copolymers comprising methacrylic acid and ethyl acrylate units. Several cationic polymers are taught including, Polyquaternium 16, Polyquaternium 11, Polyquaternium 10, Polyquaternium 4, Polyquaternium 44, and Polyquaternium 46. Schehlmann also teaches cyclic polymers defined on column 5, which encompasses the instant Polyquaternium-7. The preferred cationic polymers are employed are copolymers having vinylpyrrolidone units, especially copolymers with vinylcaprolactam and vinylimidazolium methyl sulfate (Polyquaternium 46). The cationic polymers in a concentration of from 0.05 to 5 % and the anionic polymers in a concentration of from 0.05 to 7% by weight. The composition further includes auxiliaries such as colorants, preservatives, emulsifiers, fragrances, electrolytes, viscosity regulators, foam stabilizers and further customary cosmetic base materials. The compositions may also include other polymers in order to enhance the film-forming properties. See column 8, lines 30-68.

Example 8 teaches a composition comprising 1.67% MAA/EA copolymer (instant at least one copolymer), 0.13% aminomethylpropanol (instant neutralizing agent), 2.50% Polyquaternium 46, 0.50% Cremophor A 25 (fatty alcohol ethoxylate- nonionic surfactant), 1% Tego-Betaine (amphoteric surfactant), 0.70% Cremophor RH 40 (hydrogenated castor oil), 0.20% perfume oil, 0.10% preservative, and water (solvent) to balance. Comparative example 11 also teaches a composition comprising 1.67% MAA/EA copolymer (instant at least one copolymer), 0.13% aminomethylpropanol (instant neutralizing agent), 2.50% Polyquaternium



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46, 0.50% Cremophor, 1% Tego-Betaine, 0.70% Cremophor RH, 0.20% perfume oil, 0.10% preservative, water and additionally 10% of a propellant (propane/butane). Both compositions had very good foam stability wherein the foam remained unchanged.

Schehlmann does not teach “at least one dialkyldiallyl ammonium chloride/acrylamide copolymer” or a specify the use of pressure resistant container for comparative example 11.

Bolich teaches a personal care composition for the hair, skin, and nails an in particular a hair styling composition that provides style retention. See abstract and column 2, lines 44-50. Bolich teaches the use of hair styling polymers include nonionic, anionic, and cationic polymers, and *mixtures thereof*. The non-silicone-containing hair styling polymers are preferably present in a combined amount of from about 0.01% to about 20%, more preferably from about 0.1% to about 15%, and most preferably from about 0.5% to about 10% by weight of composition. Bolich teaches suitable cationic polymers include Polyquaternium-4; Polyquaternium-10; Polyquaternium-11; Polyquaternium-16; Chitosan PCA; **Polyquaternium-7 (instantly claimed dialkyldiallyl ammonium chloride/acrylamide copolymer with the instant charge density)**; Polyquaternium-46, etc. See column 21, lines 20-55. Bolich teaches nonionic polymers including Polyvinylpyrrolidone; PVP/VA; PVP/DMAPA acrylates copolymer; and Hydroxylpropyl Guar Gum. See 22, lines 26-30.

Bolich teaches utilizing one or more of the conventionally known aerosol propellants to propel the compositions when the hair styling compositions is dispensed from a pressurized aerosol container such as an aerosol cans for hair sprays and mousses. Bolich teaches several suitable dispensers. Bolich teaches the selection of hydrocarbons such as propane, butane and isobutene in the amount of 1-30% and preferably 4-15% for hair sprays and mousses to provide a

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stable system giving the desired spray/foam quality. Non-aerosol foams may also be utilized when the composition does not comprises a propellant. See column 26, line 65 to column 27, line 50 and examples.

Bolich teaches that if the composition comprises a polymer with an acidic functionality (anionic polymers), neutralizing agents well known in the art such as 2-amino-2-methyl-1-propanol (AMP), monoethanolamine (MEA), triethanolamine (TEA), etc. are utilized to promote solubility/dispersibility of the polymer. In addition, use of the neutralized form of the polymer aids in the ability of the dried hair styling compositions to be removed from the hair by shampooing. However, Bolich teaches neutralization levels in excess of what is required for shampoo removability result in excessively sticky products that do not hold as well in high humidity. Thus, Bolich teaches that when acidic monomers are neutralized, it is preferred that from neutralization is about 5% to 60%. Bolich teaches that the optimal level of neutralization for a specific polymer will depend on the polarity of the monomers selected, the specific ratios of the monomers to each other, and the percentage of acidic monomers. Bolich provides an equation in which the level of base needed to neutralize the acid groups in a polymer for a specific %. See column 25, lines 1-35.

Bolich teaches the use of one or more surfactants for emulsifying hydrophobic components in an amount of about 0.01% to about 10%. Bolich a wide variety of surfactants can be used, including anionic, cationic, amphoteric, and zwitterionic surfactants. Bolich teaches cationic surfactants useful in foaming compositions contain amino or quaternary ammonium hydrophilic moieties, which are positively charged when dissolved in the aqueous composition of the present invention. Among the quaternary ammonium-containing cationic surfactant

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materials useful herein are those of the instant formula ( $N^+ R_1 R_2 R_3 X^-$ ) and instant  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_4$  and  $X$  is an anion. See column 24, lines 6-30. Bolich teaches the use of conventional additives that are known in the personal care art, particularly in the hair care art. These additives include dyes, tints, bleaches, and other colorants. See column 14, line 55 to column 15, line 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Schehlmann et al and Bolich et al and utilize the instant polymer, Polyquaternium 7, in place of Schehlmann's Polyquaternium polymers, specifically Polyquaternium 46. One would have been motivated to do so since Bolich teaches the conventional use of cationic polymers such as Polyquaternium 7 and Polyquaternium 46 in hair styling composition. Therefore, a skilled artisan would have been motivated to substitute Schehlmann's Polyquaternium 46 with the instant Polyquaternium 7 since the prior art teaches the equivalency of Schehlmann's cationic polymer (Polyquaternium 16, Polyquaternium 11, Polyquaternium 10, Polyquaternium 4, Polyquaternium 44, and Polyquaternium 46) and instantly claimed dialkyldiallyl ammonium chloride/acrylamide copolymer (Polyquaternium 7) in hair styling compositions. Moreover, a skilled artisan would have expected success since Schehlmann teaches several suitable cationic polymers such as cyclic polymers with formula (III), which encompasses Polyquaternium-7.

Secondly, it would have been obvious a skilled artisan to utilize a pressure resistant container to dispense the aerosol composition disclosed in Schehlmann. One would have been motivated to do so since Schehlmann teaches that it is conventional in the aerosol art to utilize a pressure resistance to dispense a propellant based hair styling compositions.

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With regard to claim 12-13, although Schehlmann teaches the use of additional polymers for film forming, Schehlmann does not specify a non-ionic polymer. However, it would have been obvious to a skilled artisan to utilize a nonionic polymer in addition to the cationic and anionic polymer taught in Schehlmann since Bolich teaches it is conventional to utilize a mixture of cationic polymers, anionic polymers, nonionic polymers for hair compositions. One would have been motivated to utilize an additional polymer such as instantly claimed to impart additional hair fixing properties to the composition. Further, a skilled artisan would have expected success since Schehlmann suggests the use of other polymers other than cationic and anionic polymers.

With regard to 9, although Schehlmann teaches the use of different surfactants in the composition, Schehlmann does not teach a cationic surfactant. However, it would have been obvious to utilize a cationic surfactant in combination with a nonionic surfactant since Bolich teaches that mousse formulation may contain one or more surfactants including nonionic, cationic, amphoteric, and zwitterionic surfactants. One would have been motivated to utilize the appropriate surfactant system depending on the components present in the composition and the surfactant system needed to stabilize the composition.

With regard to the positive and negative charge imparted by the polymers and neutralization of the anionic polymer, Schehlmann teaches the use of a neutralizer in the composition but does not specify how much the anionic polymer is neutralized. However, Bolich teaches neutralization of a polymer is known to those skilled in the art. Bolich teaches at least partially neutralizing (about 5-60%) an acidic polymer promotes solubility of the polymer in the composition and a neutralized polymer is easier to remove from the hair during shampooing.

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Bolich also teaches that excess neutralization provides a sticky product and Bolich also teaches that the optimal level of neutralization for a specific polymer will depend on the polarity of the monomers selected, the specific ratios of the monomers to each other, and the percentage of acidic monomers. Therefore, it would have been obvious to a skilled artisan to partially neutralize the anionic polymer to promote its solubility of the polymer in the composition and aid in its removal from the hair during shampooing. Thus, the ratio of the negative charge to the positive charge depends on the neutralization of the anionic polymer and the manipulation of this parameter is considered *prima facie* obvious in light of Bolich's teachings as delineated above.

With regard to claim 14, Schehlmann teaches the use of colorants in the composition; however it is unclear if this "colorant" refers to a hair dyeing substance or a pigment that imparts color to the composition. However, it would have been obvious to a skilled artisan to utilize a hair coloring agent since Bolich teaches the use of tints, bleaches, and dyes are conventional in the hair care art. Thus, one would have been motivated to do so if one desired to provide a mousse formulation that has the ability to impart color to the hair while simultaneously providing hair fixative properties.

Lastly, it is noted that the examiner relies on the comparative example is making the instant rejection; however the comparative example in Schehlmann's disclosure constitutes prior art since "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." *In re Gurley*, 27, F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir 1994). Moreover the only difference between Schehlmann's inventive example 9 and comparative example 11 is the use of a propellant and not the hair styling composition itself. Further, Schehlmann teaches both have similar properties

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with regard to foam stability, curl retention, stickiness, wet compatibility, dry compatibility, and feel of hair; thus it is noted that the propellant does not have a deleterious effect on the hair styling composition. It should be additionally noted that the premise of the instant rejection is not based on the use of a propellant versus a propellant free compositions, it is based on the obviousness of the hair setting polymers utilized in the hair styling composition.

With regard to the instant functional limitation, it is the examiner's position that the instantly claimed functional limitation will implicitly flow from the combination from Schehlmann et al and Bolich et al wherein the foam composition has the same polymers.

### ***Response to Arguments***

Applicant argues that the instant composition is sticky to provide the instant strand forming property and Schehlmann teaches a non-sticky composition. Applicant argues that when Polyquaternium 46 is added, this stickiness decreases to no stickiness. Applicant argues that Schehlmann teaches away from sticky composition and thus if a reference teaches away, it cannot be used in a rejection. Applicant argues Bolich teaches a composition without stickiness and thus teaches away from the instant strand drawing properties. Applicant has not provided any evidence that Schehlmann's composition does not have strand-forming properties.

Applicant's arguments filed 3/31/06 have been fully considered but they are not persuasive. Firstly, the premise of the rejection is not based on modifying a non-sticky composition to a sticky composition. The premise of the rejection is based on substituting a cationic polymer with a functionally equivalent cationic polymer, i.e. substituting Polyquaternium-46 with Polyquaternium-7. The examiner's motivation to combine references need not be that of the applicant's, i.e. providing a sticky composition. It is the examiner's

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position that the instant functional limitation would flow naturally from the combination of Schehlmann and Bolich. Furthermore, the examiner points out that Schehlmann teaches cationic polymers that are suitable for the foam include those taught in DE 32 17 059 and teaches cyclic polymers with the Formula (III) on column 5, which encompasses the instantly claimed Polyquaternium-7. Further, DE 32 17 059, specifically teaches Polyquaternium-7 (MERQUAT 550) as the preferred cyclic polymers on page 29. Thus, clearly there is a suggestion of the use of the instant polymer. It should be noted that "Disclosed examples and preferred embodiments do not constitute a teaching away from the broader disclosure or nonpreferred embodiment". In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Applicant has not shown any unexpectedness of the utilizing Polyquaternium-7 versus the prior art's exemplified Polyquaternium-46. The examiner suggests providing a side-by-side comparison of the prior art's composition with Polyquaternium-46 and the instant composition utilizing Polyquaternium-46 and the strand forming properties of the prior art versus the instant invention's strand forming properties.

Secondly with regard to Schehlmann not having any strand forming properties, comparative example 11 disclosed by Schehlmann has some stickiness since the quantitative measure disclosed by Schehlmann is 0 equals no stickiness and 5 equals very sticky. Thus, Schehlmann's foam with a stickiness of 1 must have some strand forming property. With regard to Bolich, the examiner points out that Bolich teaches away from an unacceptably sticky composition; however nowhere in the reference does Bolich teaches non-sticky composition as argued by applicant. The examiner further points out that hairstyling products must have a certain amount of stickiness to provide style retention and the instant disclosure does not define the amount of stickiness that provides the instantly claimed strand forming properties.. The

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instant specification discloses the composition “Foam with good strand drawing or forming properties and good compact foam quality is obtained, which breaks up quickly in the hair and is easily worked into the hair. It is characterized by good styling properties, i.e. by an especially good easy hair brushing during dry styling of moist treated hair, pleasant smooth feel of the moist and dry hair, good elasticity, no loading of the hair, beautiful luster and strong fixing.” Schehlmann teaches the composition has good foam stability, curl retention, wet compatibility, dry compatibility, and feel of hair and when the foam is “applied to the hair its is soft and can be distributed easily.” Therefore, it appears the foam qualities of the prior art and the instant composition are similar. Applicant has not provided any evidence that Schehlmann’s composition does not have strand-forming properties. Lastly, it is pointed out that that the instant claims recite the strand must have “diameter of 2mm or *less than 1mm*”, which includes all the values below 1mm, including zero.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.



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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claim 16 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,589,510; claims 1-9 of US 6,328,950. Although the conflicting claims are not identical, they are not patentably distinct from each other because :**

The instant application is directed to an aerosol foam product comprising 1) a pressure resistant container, 2) at least one hair fixing polymer, 3) at least one propellant, and 4) a solvent wherein the composition has forming properties or strand drawing properties.

US '510 is directed to hair treatment product consisting of a pressure-resistant aerosol container equipped with a spray head and a composition contained in said pressure-resistant container, wherein said composition comprises at least 60% by weight of water (solvent); from 1 to 30% by weight of at least one monovalent alcohol (solvent) with 1 to 5 carbon atoms, as a foam-breaking agent; from 0.01 to 5% by weight of a surfactant component; from 0.1 to 20% by weight of at least one hair-fixing polymer; and at least one aerosol propellant; whereby a fast-breaking unstable foam is formed when the composition is sprayed by actuating said spray head.

US '950 is directed to a device for temporarily coloring hair, said device comprising an aerosol container with a foam dispenser; and a foamable colored gel containing from 35 to 98 percent by weight water; (solvent); at least one inorganic pigment; at least one film-forming, hair-fixing polymer; at least one foam-generating surfactant and at least one propellant. The aerosol container is a plastic or glass container (pressure resistant container).

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The instant application, US '510, and US '950 are directed to overlapping subject matter wherein both claim an aerosol foam product comprising a hair fixing polymer, a propellant, and a solvent. contained in a pressure resistant container. It should be noted that the instant application has comprising language and thus can include other components such as '510's surfactants and '950's pigments. With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. "Products of identical chemical composition can not have mutually exclusive properties." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Claim 16 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of copending application 10/435953. Although the conflicting claims are not identical, they are not patentably distinct from each other because :**

The instant application is directed to an aerosol foam product comprising 1) a pressure resistant container, 2) at least one hair fixing polymer, 3) at least one propellant, and 4) a solvent wherein the composition has forming properties or strand drawing properties.

'953 is directed to an aerosol foam product contained in a pressure resistant container with a propellant comprising a composition of at least one cationic cellulose derivative (hair fixing polymer), at least one chitosan at least one acid for neutralization, and a solvent system.

The instant application and '953 are directed to overlapping subject matter wherein both claim an aerosol foam product comprising a hair fixing polymer, a propellant, and a solvent. contained in a pressure resistant container. It should be noted that the instant application has comprising language and thus can include other components such as '953's neutralizing agent.

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With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. "Products of identical chemical composition can not have mutually exclusive properties." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Claim 16 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 9 of U.S. Patent No. 6,156,298 in view of Bolich et al (5,965,115). Although the conflicting claims are not identical, they are not patentably distinct from each other because:**

The instant application is directed to an aerosol foam product comprising 1) a pressure resistant container, 2) at least one hair fixing polymer, 3) at least one propellant, and 4) a solvent wherein the composition has forming properties or strand drawing properties.

US '298 is directed to a hair treatment composition consists of an aqueous or aqueous-alcoholic solution (solvent system) and said solution comprises at least one fatty acid glyceride polyalkylene glycol ether; and at least one propellant selected from the group consisting of dimethyl ether and volatile hydrocarbons; and wherein the composition is in the form of a foam.

Claim 9 is directed to a film-forming hair fixing polymer.

US patent does not claim a pressure resistant container.

Bolich teaches a personal care composition for the hair, skin, and nails an in particular hair styling composition that provides style retention. See abstract and column 2, lines 44-50. Bolich teaches utilizing one or more of the conventionally known aerosol propellants to propel the compositions when the hair styling compositions is dispensed from a pressurized aerosol

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container such as aerosol cans for hair sprays and mousses. See column 26, line 65 to column 27, line 50 and examples.

It would have been obvious to one of ordinary skill in the art at the time at the time the invention to utilize a pressure resistant container to hold to aerosol foam composition in US '477. One would have been motivated to do so since Bolich demonstrates the state of the aerosol art wherein it is known and routine to utilize pressurized dispenser such as aerosol cans to contain the hair composition comprising a propellant. It is prima facie obvious to utilize a dispenser that is pressure resistant for pressurized compositions. Therefore, the instant application is an obvious modification of US patent. It should be noted that the instant application has comprising language and thus can include other components such as the surfactant claimed in 298. With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. "Products of identical chemical composition can not have mutually exclusive properties." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Claim 16 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 5 of U.S. Patent No. 6,475,475 in view of Bolich et al (5,965,115). Although the conflicting claims are not identical, they are not patentably distinct from each other because:**

The instant application is directed to an aerosol foam product comprising 1) a pressure resistant container, 2) at least one hair fixing polymer, 3) at least one propellant, and 4) a solvent wherein the composition has forming properties or strand drawing properties.

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US '475 an aqueous or aqueous-alcoholic solution (solvent system), at least one terpolymer made from vinyl pyrrolidone, vinyl caprolactam and a basic acrylamide monomer (hair fixing polymer), at least one anionic polymer. Claim 5 is directed to the composition in the form of an aerosol foam with a propellant.

US patent does not claim a pressure resistant container.

Bolich teaches a personal care composition for the hair, skin, and nails an in particular hair styling composition that provides style retention. See abstract and column 2, lines 44-50. Bolich teaches utilizing one or more of the conventionally known aerosol propellants to propel the compositions when the hair styling compositions is dispensed from a pressurized aerosol container such as aerosol cans for hair sprays and mousses. See column 26, line 65 to column 27, line 50 and examples.

It would have been obvious to one of ordinary skill in the art at the time at the time the invention to utilize a pressure resistant container to hold to aerosol foam composition in US '477. One would have been motivated to do so since Bolich demonstrates the state of the aerosol art wherein it is known and routine to utilize pressurized dispenser such as aerosol cans to contain the hair composition comprising a propellant. It is prima facie obvious to utilize a dispenser that is pressure resistant for pressurized compositions. Therefore, the instant application is an obvious modification of US patent. Therefore, the instant application is an obvious modification of US patent. With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. "Products of identical chemical composition can not have mutually exclusive properties." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Claim 16 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 7 of U.S. Patent No. 6,383,477 in view of Bolich et al (5,965,115). Although the conflicting claims are not identical, they are not patentably distinct from each other because:**

The instant application is directed to an aerosol foam product comprising 1) a pressure resistant container, 2) at least one hair fixing polymer, 3) at least one propellant, and 4) a solvent wherein the composition has forming properties or strand drawing properties.

US '477 is directed to volume-imparting hair treatment composition comprising from 0.1-20 percent by weight of at least one terpolymer made from vinyl pyrrolidone, vinyl caprolactam and a basic acrylamide monomer (hair fixing polymer), and from 0.05 to 10 percent by weight of at least one hair-care material with at least one cationic group. Claim 7 is directed to the composition in the form of an aerosol foam with a propellant.

US patent does not claim a pressure resistant container or a solvent.

Bolich teaches a personal care composition for the hair, skin, and nails an in particular hair styling composition that provides style retention. See abstract and column 2, lines 44-50. Bolich teaches utilizing one or more of the conventionally known aerosol propellants to propel the compositions when the hair styling compositions is dispensed from a pressurized aerosol container such as aerosol cans for hair sprays and mousses. See column 26, line 65 to column 27, line 50 and examples. Bolich teaches the conventional use of a solvent system such as water and alcohols to dissolve the polymer in the composition. See column 28.

It would have been obvious to one of ordinary skill in the art at the time at the time the invention to utilize a pressure resistant container to hold to aerosol foam composition in US '477.

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One would have been motivated to do so since Bolich demonstrates the state of the aerosol art wherein it is known and routine to utilize pressurized dispenser such as aerosol cans to contain the hair composition comprising a propellant. It is prima facie obvious to utilize a dispenser that is pressure resistant for pressurized compositions. Therefore, the instant application is an obvious modification of US patent. Further, it is obvious to utilize a solvent system when preparing a hair styling composition to dissolve the hair-fixing polymer as evidenced by Bolich who teaches the general state of the aerosol art in particular hair compositions. Therefore, the instant application is an obvious modification of US patent. With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. "Products of identical chemical composition can not have mutually exclusive properties." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Claim 16 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 13 of U.S. Patent No. 4,976,952 and claims 1 and 7 of US 4,931,271 respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other because:**

The instant application is directed to an aerosol foam product comprising 1) a pressure resistant container, 2) at least one hair fixing polymer, 3) at least one propellant, and 4) a solvent wherein the composition has forming properties or strand drawing properties.

US patent '952 is directed to a cosmetic composition of the treatment of the hair or skin and comprises cosmetic base and quaternary N-substituted chitosan (hair fixing polymer). Claim 13 is directed to an aqueous-alcoholic cosmetic base (solvent system), which is mixed with a

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propellant liquifying under pressure and drawn off into a pressure vessel (the container) and is an aerosol foam. The chitosan derivatives have hair setting properties. See column 3, lines 55-60.

US '271 is directed to cosmetic composition for treatment of hair or skin comprising a chitosan derivative N-hydroxybutylchitosans and in a aqueous, alcoholic, or an aqueous-alcoholic form (solvent). Claim 7 is directed to the composition further containing a propellant and filled into a pressurized container to produce a aerosol spray or an aerosol foam. The chitosan derivatives have hair setting properties. See column 3, lines 55-60.

The instant application and '953 and '952 are directed to overlapping subject matter wherein the instant claims and US patents claim aerosol foams comprising a hair fixing polymer, a propellant, and a solvent contained in a pressurized container (note that pressurized containers are pressure resistant). With regard to the instant functional limitation, the examiner points out that the prior art teaches the same claimed components and thus the prior art must have the same property, i.e. "Products of identical chemical composition can not have mutually exclusive properties." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

***Response to Arguments on Double Patenting Rejection***

Applicant argues US patents 6,328,950; 4,931,271; 4,976,952; and application 10/435953 do not teach or claim the instant strand drawing properties.

Applicant's arguments filed 3/31/06 have been fully considered but they are not persuasive. The instant claim is directed to 1) at least one hair-fixing polymer, 2) at least one propellant, 3) at least one solvent system in a pressure resistant container. The examiner points out that the claims of US patents and provisional application '953 claim the same physical components as claimed; thus the functional limitation must be the same.



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“Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present.” In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). See MPEP 2112.01 (I).

***Response to Arguments on Double Patenting Rejection on a Combination with Bolich***

Applicant argues US patents 6,156, 298; 4,475,475; and 4,387,477 do not teach or claim the instant strand drawing properties. Applicant argues that Bolich teaches away from a sticky composition and this one cannot combine references that are opposite from the claimed invention.

Applicant's arguments filed 3/31/06 have been fully considered but they are not persuasive. Firstly, the examiner points out that US patents claims the same composition as instant claims, i.e. 1) at least one hair-fixing polymer, 2) at least one propellant, 3) at least one solvent system in a pressure resistant container. The only deficiency is the teaching of pressure resistant container. Thus, the examiner relies on Bolich to teach the conventional and routine use of pressure resistant containers for aerosol compositions. Thus, this combination does not effect the composition itself and thus the argument that Bolich does not teach a sticky composition is moot. With regard to the functional limitation, the claims of US patents claim the same physical components as claimed; thus the functional limitation must be the same.

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“Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present.” *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). See MPEP 2112.01 (I).

### ***Conclusion***

All the claims are rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

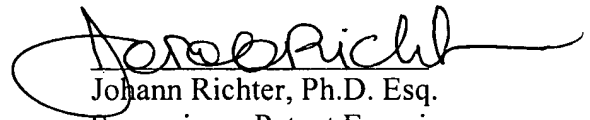
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila S. Gollamudi whose telephone number is 571-272-0614. The examiner can normally be reached on M-F (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sharmila S. Gollamudi  
Examiner  
Art Unit 1616

  
Johann Richter, Ph.D. Esq.  
Supervisory Patent Examiner  
Technology Center 1600